

What is claimed is:

1. A method for managing network resources for transfer of data stored in a data storage environment, the method comprising the computer-executed steps of:

5 requesting from a server for services on an internet network, a bandwidth for data transfer from a first data storage system to a second data storage system over the internet network based on the amount of data to be transferred;

transferring data in response to a bandwidth allocation from the server based on the request;

10 monitoring internet network traffic characteristics during the data transfer; and

responsive to the monitored internet network traffic characteristics, selectively requesting an effect on bandwidth allocation.

15 2. The method of claim 1, wherein the effect requested is to increase bandwidth allocation.

3. The method of claim 1, wherein the request is in accordance with a Java-based protocol.

20 4. The method of claim 3, wherein the effect requested is to increase bandwidth allocation is based on the data transfer not meeting at least one performance criterion.

5. The method of claim 4, wherein the at least one performance criterion is based on a predetermined data transfer rate.

6. The method of claim 5, wherein the effect requested is to increase bandwidth allocation is based on the data transfer lagging behind based on the predetermined data transfer rate.

7. The method of claim 6, wherein the monitored internet network traffic characteristics include information regarding packet latency and the data transfer lagging behind is further based on packet latency.

8. The method of claim 6, wherein the monitored internet network traffic characteristics include information regarding packet loss and the data transfer lagging behind is further based on packet loss.

9. The method of claim 1, wherein the data transfer is at least part of a data replication process.

10. The method of claim 9, wherein the request is in accordance with a Java-based protocol.

11. The method of claim 10, wherein the effect requested is to increase bandwidth allocation is based on the data transfer not meeting at least one performance criterion.

12. The method of claim 11, wherein the at least one performance criterion is based
5 on a predetermined data transfer rate.

13. The method of claim 12, wherein the effect requested is to increase bandwidth allocation is based on the data transfer lagging behind based on the predetermined data transfer rate.

14. The method of claim 13, wherein the monitored internet network traffic characteristics include information regarding packet latency and the data transfer lagging behind is further based on packet latency.

15. The method of claim 12, wherein the monitored internet network traffic characteristics include information regarding packet loss and the data transfer lagging behind is further based on packet loss.

16. The method of claim 9, wherein the data replication is carried out in accordance
20 with a replication policy.

17. The method of claim 16, wherein the replication policy defines replication groups including devices distributed between the first and second data storage systems and the data replication process is completed when all devices in the replication groups are synchronized.

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18. A networked computer system for managing network resources for transfer of data in a data storage environment, the networked computer system comprising:

a first data storage system;

a second data storage system in communication with the first data storage system over an internet network;

a server for providing internet services over the internet network; and

a network communication device capable of enabling the method steps of:

requesting from a server for services on an internet network, a bandwidth for data transfer from the first data storage system to the second data storage system over the internet network based on the amount of data to be transferred;

transferring data in response to a bandwidth allocation from the server based on the request;

monitoring internet network traffic characteristics during the data transfer; and

responsive to the monitored internet network traffic characteristics, selectively

requesting an effect on bandwidth allocation.

19. The system of claim 18, wherein the data transfer is at least part of a data replication process.

20. The system of claim 19, wherein the request is in accordance with a Java-based.
5 protocol.

21. The system of claim 20, wherein the effect requested is to increase bandwidth allocation is based on the data transfer not meeting at least one performance criterion.

10 22. The system of claim 21, wherein the at least one performance criterion is based on a predetermined data transfer rate.

23. The system of claim 22, wherein the effect requested is to increase bandwidth allocation is based on the data transfer lagging behind based on the predetermined data
15 transfer rate.

24. The system of claim 23, wherein the monitored internet network traffic characteristics include information regarding packet latency and the data transfer lagging behind is further based on packet latency.

25. The system of claim 22, wherein the monitored internet network traffic characteristics include information regarding packet loss and the data transfer lagging behind is further based on packet loss.

5 26. The system of claim 19, wherein the data replication is carried out in accordance with a replication policy.

27. The system of claim 26, wherein the replication policy defines replication groups including devices distributed between the first and second data storage systems and the
10 data replication process is completed when all devices in the replication groups are synchronized.

28. A program product for managing network resources for transfer of data stored in a data storage environment, the program product being for management of data and being
15 comprised of:

computer-executable logic contained on a computer-readable medium and which is configured for causing the following computer-executed steps to occur:

requesting from a server for services on an internet network, a bandwidth for data transfer from a first data storage system to a second data storage system
20 over the internet network based on the amount of data to be transferred;

transferring data in response to a bandwidth allocation from the server based on the request;

monitoring internet network traffic characteristics during the data transfer;
and
responsive to the monitored internet network traffic characteristics,
selectively requesting an effect on bandwidth allocation.